From: Dawn Ioven/R3/USEPA/US
Sent: 5/30/2013 5:03:14 PM

To: johnson.eric@epa.gov
CC:
Subject: Tox Blurbs for Dimock CoPCs

Aluminum

Workers who breathe large amounts of aluminum dusts can have lung problems, such as coughing or abnormal chest X-rays. Some workers who breathe aluminum dusts or aluminum fumes have decreased performance in some tests that measure functions of the nervous system.

Some people with kidney disease store a lot of aluminum in their bodies and sometimes develop bone or brain diseases which may be caused by the excess aluminum. Some studies show that people exposed to high levels of aluminum may develop Alzheimer's disease, but other studies have not found this to be true. We do not know for certain whether aluminum causes Alzheimer's disease.

Studies in animals show that the nervous system is a sensitive target of aluminum toxicity. Obvious signs of damage were not seen in animals after high oral doses of aluminum. However, the animals did not perform as well in tests that measured the strength of their grip or how much they moved around.

Arsenic

Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso.

Skin contact with inorganic arsenic may cause redness and swelling.

Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen.

Iron

Manganese

The most common health problems in workers exposed to high levels of manganese involve the nervous system. These health effects include behavioral changes and other nervous system effects, which include movements that may become slow and clumsy. Other less severe nervous system effects such as slowed hand movements have been observed in some workers exposed to lower concentrations in the work place.

Nervous system and reproductive effects have been observed in animals after high oral doses of manganese.

Bis(2-ethylhexyl)phthalate

Harmful effects in animals generally occurred only with high amounts of BEHP or with prolonged exposures. Moreover, absorption and breakdown of BEHP in humans is different than in rats or mice, so the effects seen in rats and mice may not occur in humans.

Rats that breathed BEHP in the air showed no serious harmful effects. Their lifespan and ability to reproduce were not affected.

Brief oral exposure to very high levels of BEHP damaged sperm in mice. Although the effect reversed when exposure ceased, sexual maturity was delayed in the animals.

High amounts of BEHP damaged the liver of rats and mice. Whether or not BEHP contributes to human kidney damage is unclear.

Skin contact with products containing BEHP will probably cause no harmful effects because it cannot be taken up easily through the skin.

The Department of Health and Human Services (DHHS) has determined that BEHP may reasonably be anticipated to be a human carcinogen. The EPA has determined that BEHP is a probable human carcinogen. These determinations were based entirely on liver cancer in rats and mice.

2-Methoxyethanol

triethylene glycol

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